

DEPARTMENT OF THE INTERIOR

Fish and Wildlife

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposal To Determine the Spikedace To Be a Threatened Species and To Determine Its Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service proposes to list a fish, *Meda fulgida* (spikedace), as a threatened species and to determine its critical habitat under the authority contained in the Endangered Species Act of 1973, as amended. A special rule allowing take for certain purposes in accordance with New Mexico and Arizona State laws and regulations is proposed. *Meda fulgida* is endemic to the Gila River system upstream from the city of Phoenix, but is presently found only in Aravaipa Creek, Graham and Pinal Counties, Arizona; sections of the Gila River upstream from the town of Red Rock in Grant and Catron Counties, New Mexico; and in a portion of the upper Verde River, Yavapai County, Arizona. The historic range of *Meda fulgida* included the upper San Pedro River in Sonora, Mexico, but the species has been extirpated there due to dewatering of the river. The distribution and numbers of *Meda fulgida* have been severely reduced by habitat destruction due to damming, channel alteration, riparian destruction, channel downcutting, water diversion, and groundwater pumping. Only approximately 6 percent of the historic range presently supports populations of this species. The species continues to be threatened by proposed dam construction, water losses, and habitat alteration. Survival of the species is also threatened by the introduction and spread of exotic predatory and competitive fish species. A final determination of *Meda fulgida* to be a threatened species would implement the protection provided by the Endangered Species Act of 1973, as amended. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by August 19, 1985. Public hearing requests must be received by August 2, 1982.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103. Comments and materials received will

be available for public inspection during normal business hours, by appointment, at the Service's Regional Office of Endangered Species, 500 Gold Avenue SW., Room 4000, Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: Dr. James E. Johnson, Chief, Regional Office of Endangered Species, U.S. Fish and Wildlife Service, Albuquerque, New Mexico (See **ADDRESSES** above) (505/766-3972 or FTS 474-3972).

SUPPLEMENTARY INFORMATION:**Background**

Meda fulgida was first collected in 1851 from the Rio San Pedro in Arizona, and was described from those specimens in 1856 by Girard. It is a small (less than 75 millimeters), slim fish, characterized by very silvery sides, and by spines in the dorsal and pelvic fins. Breeding males develop a brassy golden color. *Meda fulgida* is found in moderate to large perennial streams, where it inhabits shallow riffles with gravel and rubble substrates and moderate to swift currents, and swift pools over sand or gravel substrates (Barber and Minckley, 1970). Recurrent flooding is very important in the life history of *Meda* and helps to maintain its competitive edge over invading exotic fish species.

Meda fulgida was once common throughout much of the Verde, Agua Fria, Salt, San Pedro, San Francisco, and Gila (upstream from Phoenix) River systems, occupying habitat in both the mainstreams and moderate gradient perennial tributaries, up to 1800-1900 meters elevation. Because of habitat destruction and competition and predation by exotic fish species, its range and abundance have been severely reduced, and it is now restricted to approximately 24 kilometers of Aravaipa Creek, Graham and Pinal Counties, Arizona; approximately 73 kilometers of the upper Gila River in the Middle Box Canyon, the Cliff-Gila Valley and the lower end of the West and Middle Forks, Grant and Catron Counties, New Mexico; and approximately 57 kilometers of the Verde River from below Sullivan Lake downstream to just below the mouth of Sycamore Canyon, Yavapai County, Arizona (Anderson, 1978; Minckley, 1973; Barrett, *et al.*, in prep.; Propst, in prep.). The historic range of *Meda fulgida* included approximately 2600 kilometers of river. The 154 kilometers of presently occupied range represent only 6 percent of the historic range.

Land ownership in existing *Meda fulgida* habitats is mixed and is as follows:

Aravaipa Creek

1. *Bureau of Land Management*—about 75 percent of the perennial length of the stream, most of which is designated as the Aravaipa Canyon Wilderness.

2. *Defenders of Wildlife*—most of the perennial stream above and below the Wilderness is owned or leased as the George Whittell Wildlife Preserve.

3. *Other privately owned*—a few scattered parcels along the perennial stream length.

Gila River

1. *Bureau of Land Management*—approximately 4 kilometers of river just downstream from the Middle Box canyon which is part of a designated Area of Critical Environmental Concern. An additional ½ kilometer is located below Cliff, New Mexico.

2. *Privately owned*—most of the Cliff-Gila Valley, also near Gila Hot Springs.

3. *The Nature Conservancy*—a small portion of river upstream from the town of Gila.

4. *New Mexico Department of Game and Fish*—approximately 6½ kilometers of river just downstream from the confluence of the West and Middle Forks.

5. *U.S. Forest Service*—a large portion of the river is in the Gila National Forest with sections flowing through the Gila Wilderness, the Lower Gila River Bird Habitat Management Area, and the Gila River Research Natural Area.

Verde River

1. *U.S. Forest Service*—Prescott National Forest.

2. *Privately owned*—interspersed inholdings within Forest Service lands, and along the river below Sullivan Lake.

3. *State of Arizona*—approximately 3½ kilometers of scattered State lands are located along the Verde River below Sullivan Lake.

The native fish fauna of the Gila River system, including *Meda fulgida*, has been drastically affected by man's alteration of that system, with 35 percent presently federally listed as endangered, and another 35 percent considered to be threatened or endangered by the States of Arizona and New Mexico and/or the American Fisheries Society. *Meda fulgida* has been extirpated from much of the system and was last found in the Salt River drainage in 1972, in the San Pedro River drainage (except Aravaipa Creek) in 1967, in the Agua Fria drainage in

1943, and in the San Francisco River drainage in 1950. In the Gila River downstream from Red Rock, New Mexico, scattered individual *Meda fulgida* have been found as late as 1984, but no permanent populations of *Meda* have occupied this stretch of river since 1951. A 1978 study (Anderson, 1978) documented the distribution of *Meda fulgida* in New Mexico and noted its absence from the San Francisco River system, the Gila River downstream from Red Rock, and the major tributaries of the Gila River upstream from Red Rock. The study noted that the range of *Meda fulgida* has receded 25 kilometers upstream in the Gila River in the last 26 years. Those findings were confirmed by a study conducted in 1983 and 1984 by the New Mexico Department of Game and Fish (Propst, in prep.). In addition, that study documented a loss of 40 percent in the range of *Meda* in the Gila River since 1978. This decline includes loss of *Meda* from the East Fork of the Gila River, as well as an additional 10 kilometer recession upstream from Red Rock to the mouth of the Middle Box canyon.

The continuing decline in the numbers and distribution of *Meda fulgida* has evoked concern over its survival from many sources. *Meda fulgida* was listed in 1973, as a species of concern, by the Bureau of Sport Fisheries and Wildlife (USDI, 1973) the predecessor to the Fish and Wildlife Service. It was included by the American Fisheries Society's Endangered Species Committee on their 1979 list (Deacon, *et al.*, 1979) as threatened species due to habitat destruction and competition/predation from exotic species. Prior to that, it was listed as rare and possibly endangered on a 1972 list of threatened freshwater fish of the United States, published by the American Fisheries Society and the Society of Ichthyologists and Herpetologists (Miller, 1972). It has also been listed as vulnerable by the International Union for the Conservation of Nature and Natural Resources in their Red Data Book (Vol. 4) in 1977. Both the States of Arizona and New Mexico include *Meda fulgida* on their lists of threatened and endangered species (New Mexico State Game Comm., 1985; Arizona Game and Fish Comm., 1982). It was included in the Service's December 30, 1982, Vertebrate Notice of Review (47 FR 58454-58460) in category 1. Category 1 includes those taxa for which the Service currently has substantial information on hand to support the biological appropriateness of proposing to list the species as endangered or threatened. Because of concern over the survival of and to

provide protection for native species, including *Meda fulgida*, land has been acquired on the upper Gila River by The Nature Conservancy and on Aravaipa Creek by the Defenders of Wildlife.

The Service was petitioned on March 14, 1985, by the American Fisheries Society (AFS), and on March 18, 1985, by the Desert Fishes Council (DFC) to list *Meda fulgida* as threatened. Evaluation of the AFS petition by the Service revealed that substantial information was presented indicating that the petitioned action might be warranted. Publication of this proposed rule constitutes the required finding that the petitioned action is warranted. Because the species was already under active petition by AFS, the DFC petition was accepted only as a letter of comment.

Summary of Factors Affecting The Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; revised to accommodate 1982 Amendments—see final rule at 49 FR 38900, October 1, 1984) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to *Meda fulgida* (spikedace) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The majority of the historic native habitat of *Meda fulgida* has been drastically altered or destroyed by human uses of the rivers, streams, and watersheds. These alterations include: Conversion of flowing waters into still waters by impoundment; alteration of flow regimes (including conversion of perennial waters to intermittent or no flow, and the reduction, elimination, or modification of natural flooding patterns); alteration of water temperatures (either up or down); alteration of silt and bed loads; alteration of stream channel characteristics from well-defined, surface level, heavily vegetated channels with a diversity of substrate and habitats, into deeply cut, unstable arroyos with little riparian vegetation, uniform substrate and little habitat diversity; and loss of marshes and backwaters. Causes of such alterations include: damming, water diversion, channel downcutting, excessive groundwater pumping, lowering water

tables, channelization, riparian vegetation destruction, erosion, mining, grazing, and other watershed disturbances.

The biology of *Meda fulgida* is not well enough understood to determine what specific effects each of these habitat changes or losses has had on the survival of the species. However, the conversion of a large portion of the habitat into intermittent or lacustrine waters or totally dewatered channels has had an obvious effect on *Meda* populations by totally eliminating usable habitat in the impacted areas. These habitat changes, together with the introduction of exotic fish species (see factors C and E) have resulted in the extirpation of *Meda fulgida* throughout most of its historic range.

Some of the major reasons for specific *Meda* habitat losses are easily identifiable. The San Pedro River, once a perennial stream, is now severely downcut and has only intermittent flow. The lower Salt and Verde Rivers now have a very limited or no flow during portions of the year due to agricultural diversion and upstream impoundments, and both rivers have several impoundments in their middle reaches. The Gila River, after leaving the Mogollon Mountains in New Mexico, is affected by agricultural and industrial water diversion, impoundment, channelization, and has been subjected to use of chemicals for fish management from the Arizona border downstream to San Carlos Reservoir. The San Francisco River has suffered from erosion and extensive water diversion and at present has an undependable water supply throughout much of its length.

Remaining *Meda fulgida* habitat is still threatened with further habitat destruction. Aravaipa Creek is relatively protected from further habitat loss because of its status as a Bureau of Land Management Wilderness and as a Defenders of Wildlife Preserve. Access and land uses are limited in the canyon, and it is managed primarily for natural values and recreation. However, it is affected by upstream uses in the watershed, primarily groundwater pumping resulting in a continued lowering of the water table, which could eventually reduce perennial flow in Aravaipa Creek.

In the upper Gila River, *Meda fulgida* habitat is somewhat protected along the portions of the river that flow through the U.S. Forest Service Gila Wilderness and the Gila River Research Natural Area which have use and access restrictions. However, both wilderness and non-wilderness portions of the river in the National Forest are still affected

by past and present uses of the watershed and riparian zone, and by water diversion for public and private uses. On privately owned lands along the river there is no statutory control of habitat alteration or destruction. Agricultural use, water diversion, and flood control measures in these areas have a heavy impact on the habitat. The U.S. Army Corps of Engineers (Corps) has recently completed work in the Cliff-Gila area under their Emergency Authority, which allows them to replace or restore damaged flood control structures. Other flood control alternatives considered for this area in the past by the Corps have been set aside; the only current plans for flood control in the New Mexico portion of the Gila River are in cooperation with the Bureau of Reclamation's Conner Dam study (U.S. Army Corps of Engineers, 1984).

Of particular importance to *Meda fulgida* survival in the Gila River is the proposed construction of a dam on the Gila mainstream, as part of the Central Arizona Project Upper Gila Water Supply Study by the Bureau of Reclamation (USDI, 1972). Currently the Bureau of Reclamation is studying four alternatives (USDI, 1985): a high dam and reservoir at the Conner site on the mainstream Gila River near the lower end of the Middle Box canyon; a small dam and reservoir at the Conner site with an offstream storage reservoir; floodplain storage basins in the Cliff-Gila Valley; and direct pumping from the river in the Cliff-Gila Valley to an offstream storage reservoir. A high dam at the Conner site on the Gila River could have major negative impacts on *Meda fulgida*. Up to 29 kilometers of river, 40 percent of the existing range in the Gila River, would be inundated and thus would no longer support *Meda fulgida*, which lives only in flowing waters. The presence of a dam on the river could also adversely alter habitat downstream from the dam by changing the temperature, bedload, and flow regimes, including the elimination of natural flooding which is an important factor in riparian and channel maintenance and in the maintenance of the competitive edge of native over exotic fish species. Major dam and reservoir construction in the past, on the Salt, Verde, and Gila Rivers, has resulted in the complete extirpation of all *Meda fulgida* downstream of the dam and for up to 65 kilometers above the reservoir. Even with extensive planning for natural flow and temperature maintenance downstream, the construction of a dam on the upper Gila would have a strong impact on *Meda*

fulgida. A small dam at the Conner site would inundate an estimated 14 kilometers of river, and would also affect populations upstream and downstream from the reservoir. The effects of direct pumping from the river to offstream storage are not completely known, but may include entrapment of fish in pipelines, impingement of fish on intake screens, and depletion of stream flow below the diversion point. The fourth alternative of floodplain storage basins would require removal of 484 acres of riparian vegetation along the river and would eliminate 18 kilometers of aquatic habitat due to construction of the basins and to channelization and diversion of the river. Downstream from the storage area, adverse impacts to *Meda* may include increased sediments and changes in temperature and flow regimes, including the elimination of natural flooding.

Future threats to *Meda fulgida* on the Verde River are found in watershed disturbances, increasing silt in the river bed, deteriorating water quality due to upstream communities, and future water developments. The Bureau of Reclamation, as part of the Central Arizona Project (CAP), is currently working on plans for water rights exchanges between upstream and downstream water rights holders, and subsequent diversions of water from the upper Verde River. There are eight potential CAP water exchanges on the upper Verde River, but of these, only two, the city of Prescott and the Yavapai-Prescott Indian Reservation, are within or upstream from the portion of the Verde River where *Meda* is known to still exist. The Bureau of Reclamation is planning to address the cumulative impacts of all eight exchanges together, however, at present only the city of Prescott and the Yavapai-Prescott Indian Reservation have submitted proposed plans. These two entities have jointly proposed removal of water from the Verde River about 4 kilometers below Sullivan Lake by means of an infiltration gallery buried in the riverbed. The joint allocation for these two entities is 7,627 acre-feet per year, and the proposed plans call for a maximum diversion rate of 13 cubic feet per second. The effects of this diversion have not yet been studied, but the loss of the maximum planned diversion rate from the river during low flows would be significant. Average median monthly discharge near the diversion point is estimated to be 10 cubic feet per second or less for 10 months of the year (Barrett, *et al.*, in prep.). Such a reduction in flows could result in crowding, increased predation

and competition, increased water temperatures, and other negative impacts to *Meda* and other aquatic fauna.

B. Overutilization for commercial, recreational, scientific, or educational purposes. No threat from overutilization of this species is known to exist at this time.

C. Disease or predation. Historically, predation was not a significant factor affecting *Meda fulgida* populations; however, in the past 100 years, introduction of exotic predatory fish species has increased the role that predation plays in *Meda* biology. In Aravaipa Creek, there are two potential predators, the native roundtail chub and the exotic green sunfish, the latter being primarily restricted to side channel pools, and kept at low population numbers by frequent flooding. Neither are known to have a significant effect on *Meda fulgida*. In the Gila and Verde Rivers, the native roundtail chub and several exotic fish (black and yellow bullhead, channel catfish, green sunfish, flathead catfish, small and large mouth bass, and rainbow and brown trout) are probable predators on *Meda fulgida*. Although predation may not be a major threat to *Meda* in good habitat conditions, it is undoubtedly a negative factor to populations under the altered conditions present in much of the existing habitat. It has been noted that the present downstream limit of *Meda fulgida* in the Gila River closely corresponds to an increasing abundance of flathead and channel catfish (Anderson, 1978); that in the vicinity of lakes in the upper Gila drainage where game fish are heavily stocked, the populations of *Meda fulgida* are depleted (LaBounty, 1972), and that the recent extirpation of the *Meda* population in the East Fork of the Gila River is probably due to the increased numbers of smallmouth bass and catfish in that portion of the river (Propst, in prep.). In 1983 and 1984 Propst found abundant smallmouth bass and catfish in the East Fork, but few native species. Under unfavorable habitat conditions, caused by changes in flow, temperature, substrate, flooding, etc., it is likely that predation becomes an important factor in *Meda* survival. Construction of dams and reservoirs exacerbates the predation problem by increasing the habitat desirable to exotic predators, decreasing the habitat suitable for *Meda fulgida*, and supplying a ready source of predators from the reservoir and its fishery of stocked exotic fishes. The effect of predation on *Meda* in the Gila River could increase significantly if a

dam is constructed by the Bureau of Reclamation.

D. *The inadequacy of existing regulatory mechanisms.* *Meda fulgida* is protected by the States of New Mexico and Arizona. It is listed by New Mexico as an endangered species, Group 2 (New Mexico State Game Comm., 1985), which are those species "... whose prospects of survival or recruitment within the State are likely to be in jeopardy within the foreseeable future." This provides the protection of the New Mexico Wildlife Conservation Act (Section 17-2-37 through 17-2-46 NMSA 1978) and prohibits taking of such species except under the issuance of a scientific collecting permit. *Meda fulgida* is listed by the State of Arizona as a threatened species, Group 3 (Ariz. Game and Fish Comm., 1982), which are those species "... whose continued presence in Arizona could be in jeopardy in the foreseeable future." This listing does not provide any special protection to the species listed. Protection provided in the Arizona Game and Fish Regulations prohibits taking of *Meda fulgida* except by angling, an unlikely method for their capture. Neither State provides any protection of the habitat upon which the species depends.

New Mexico water law does not include provisions for the acquisition of instream water rights for protection of fish and wildlife and their habitat, and Arizona water law has only recently recognized such rights. This deficiency has been a major factor in the survival of those species dependent upon the presence of instream water.

State Game and Fish regulations in New Mexico allow the use of the red shiner and other live minnows as bait fish in the Gila River, in areas containing *Meda fulgida*. This has encouraged the spread of detrimental exotic species, specifically the red shiner, which appears to replace *Meda fulgida* under certain conditions (see Factor E.).

E. *Other natural or manmade factors affecting its continued existence.* Existing populations of *Meda fulgida* are threatened by the continued introduction and dispersal of exotic species, particularly *Notropis lutrensis* (red shiner), throughout the Gila River system. Although it is not known by what mechanisms these exotic species affect *Meda*, it is known that the spread of exotic species throughout the Gila system correlates closely to the declining numbers and distribution of *Meda fulgida* and other native species, and that *Notropis lutrensis* now occupies much of what was once *Meda* habitat. It has been demonstrated with other native fish that competitive and/or

predatory interactions with exotic species have been a major factor in the declining numbers and distribution of native fishes, and apparently *Notropis lutrensis* is a competitor with *Meda fulgida* for some habitat factors (Minckley and Deacon, 1968). In suitable unaltered habitat, it is possible that *Meda* is able to hold its own against invasion of *Notropis lutrensis* or other exotic species; however, in extensively altered habitats where *Meda* populations are already under stress, it appears that *Notropis lutrensis* has a competitive advantage and thereby replaces *Meda fulgida*. A major factor in the displacement seems to be the disturbance of natural flooding patterns, since native species such as *Meda fulgida* are adapted to and thrive under a regime of frequent moderate to severe flooding, and *Notropis lutrensis* and other exotic species do not. The controlled flow of flood waters, resulting from impoundment, interrupts this natural pattern in downstream reaches and encourages the spread of *Notropis lutrensis* at the expense of *Meda fulgida*. The presence of reservoirs also increases the likelihood and rapidity of the spread of *Notropis lutrensis* and other exotics by supplying a ready source of exotic species from the reservoir and its fishery. At present, *Notropis lutrensis* is not found in Aravaipa Creek, but is found in the Verde River along with *Meda fulgida*, and is found in the upper Gila River as far upstream as Cliff, New Mexico. In 1978, *Notropis lutrensis* had not yet been found in the Gila River in New Mexico.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Meda fulgida* as threatened. Because this fish is still locally abundant throughout approximately 154 kilometers of stream it does not appear to be in danger of extinction and therefore does not fit the definition of endangered. However, because of the drastic loss of range which this species has undergone, and the imminent threats to all major portions of its presently occupied range, threatened status is appropriate for the species.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act means: (i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological

features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed in accordance with the provisions of Section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat for *Meda fulgida* is proposed in the following areas:

1. Aravaipa Creek, Graham and Pinal Counties, Arizona. The perennial stream portion (approximately 24 kilometers long). This area includes Bureau of Land Management and privately owned lands.

2. Verde River, Yavapai County, Arizona. Approximately 57 kilometers of river extending from approximately 0.8 kilometers below the confluence with Sycamore Creek upstream to Sullivan Lake. This area includes U.S. Forest Service, private, and State lands.

3. Sycamore Creek, Yavapai County, Arizona. Approximately 1½ kilometers of stream near the confluence with the Verde River. This includes U.S. Forest Service and privately owned lands.

4. Gila River, Grant and Catron Counties, Arizona. Three sections of river totaling approximately 73 kilometers in length. The first section, approximately 50 kilometers long, extends from the mouth of the Middle Box canyon upstream to the confluence with Mogollon Creek. A second section, approximately 11½ kilometers long, extends up the West Fork from the confluence with the East Fork upstream to the west boundary of Section 22, T.12S., R.14W. The last section, approximately 11½ kilometers long, extends up the Middle Fork from its mouth upstream to the confluence with Big Bear Canyon. These river sections flow through U.S. Forest Service, Bureau of Land Management, New Mexico Department of Game and Fish, and privately owned lands.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. Any activity that would lessen the amount of the minimum flow or would significantly alter the natural flow regime in

Aravaipa Creek or the upper Gila or Verde Rivers could adversely impact the proposed critical habitat. Such activities include, but are not limited to, excessive groundwater pumping, impoundment, and water diversions. Any activity that would extensively alter the channel morphology in Aravaipa Creek or the upper Gila or Verde Rivers could adversely impact the proposed critical habitat. Such activities include, but are not limited to, channelization, excessive sedimentation from mining, grazing, and other watershed disturbances, impoundment, deprivation of substrate source, and riparian destruction. Any activity that would significantly alter the water chemistry in Aravaipa Creek or the upper Gila or Verde Rivers could adversely impact the proposed critical habitat. Such activities include, but are not limited to, release of chemical or biological pollutants into the waters at a point source or by dispersed release. The introduction, advertent or otherwise, of exotic predatory and competitive fish species, could adversely affect *Meda fulgida* populations and could reduce or eliminate them within the critical habitat.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service will consider the critical habitat designation in light of all additional relevant information obtained at the time of final rule.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies, and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are

codified at 50 CFR Part 402, and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

No Federal activities are known or expected to be affected on Bureau of Land Management lands on Aravaipa Creek, because the Aravaipa Canyon Wilderness is presently being managed to protect and enhance natural values.

On U.S. Forest Service lands on the Gila and Verde Rivers, little effect is expected on Federal activities from this proposal; however, Section 7 consultation may be needed if changes occur in current grazing, mining, timbering, recreational, or other activities affecting *Meda fulgida* and its habitat.

On Bureau of Land Management lands on the upper Gila River, little effect is expected on present Federal activities because the area involved is designated an Area of Critical Environmental Concern, which requires management to protect natural values.

Proposed dam construction or alternative water projects on the upper Gila River, which have been authorized for study as part of the Bureau of Reclamation's Upper Gila Water Supply Study, could be affected by this proposal, as could the Bureau's tentative plans for water development on the upper Verde River as part of the Central Arizona Project. Any such project would become subject to Section 7 consultation requirements.

Known Federal activities on private lands that might be affected by this proposal would be future flood control work funded by the Federal Emergency Management Agency or carried out by the U.S. Army Corps of Engineers in the Cliff-Gila Valley, or future federally funded irrigation projects. Federal funding has been used in the past and is expected to be used in the future for pipeline, water diversion, and land leveling projects on private agricultural lands in the Cliff-Gila Valley.

The Act and its implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce listed species. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions would apply to agents of the Service and State conservation agencies.

The above discussion generally applies to threatened species of fish or wildlife. However, the Secretary has the discretion under Section 4(d) of the Act to issue special regulations for a threatened species that are necessary and advisable for the conservation of the species. *Meda fulgida* is threatened primarily by habitat disturbance or alteration, not by intentional direct taking or by commercialization. Given this fact and the fact that the States currently regulate direct taking of the species through the requirement of State collecting permits, the Service has concluded that the States' collection permit systems are more than adequate to protect the species from excessive taking, so long as such takes are limited to: Educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Endangered Species Act. A separate Federal permit system is not required to address the current threats to the species. Therefore, a special rule is proposed which allows take to occur for the above stated purposes without the need for a Federal permit, if a State collection permit is obtained and all other State wildlife conservation laws and regulations are satisfied. This special rule also acknowledges the fact that incidental take of the species by State-licensed recreational fishermen is not a significant threat to this species, and that such incidental take would not be a violation of the Act, if the fisherman immediately returned the individual fish taken to its habitat. It should be recognized that any activities involving the taking of this species not otherwise enumerated in the special rule are prohibited. This special rule would allow for more efficient management of the species, and thus would enhance the conservation of the species. For these reasons, the Service concludes that this

regulatory proposal is necessary and advisable for the conservation of *Meda fulgida*.

General regulations governing the issuance of permits to carry out otherwise prohibited activities involving threatened animal species, under certain circumstances, are set out at 50 CFR 17.22, 17.23, and 17.32.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered or threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or the lack thereof) to *Meda fulgida*;

(2) The location of any additional populations of *Meda fulgida* and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range and distribution of this species;

(4) Current or planned activities in the subject area and their possible impacts on *Meda fulgida*; and

(5) Any foreseeable economic and other impacts resulting from the proposed designation of critical habitat.

Final promulgation of the regulations on *Meda fulgida* will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final rule that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National

Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

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Authors

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 to the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following in alphabetical order under "Fishes" to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fishes							
Spinedace	<i>Meda fulgida</i>	U.S.A. (AZ, NM) MEXICO	Entire	T		17.95(e)	17.44()

3. It is further proposed to add the following as a special rule to § 17.44 (the position of this special rule will be determined at the time the final rule is published in the **Federal Register**):

§ 17.44 Special rules—fishes.

() *Spikedace, Meda fulgida*

(1) No person shall take the species, except in accordance with applicable State fish and wildlife conservation laws and regulations in the following instances: (i) For educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act; or, (ii) incidental to State permitted recreational fishing activities,

provided that the individual fish taken is immediately returned to its habitat.

(2) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to taking of this species will also be a violation of the Endangered Species Act.

(3) No person shall possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever any such species taken in violation of these regulations or in violation of applicable State fish and wildlife conservation laws or regulations.

(4) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs. () (1) through () (3) of this section.

4. It is further proposed to amend § 17.95(e), "Fishes," by adding the critical habitat of *Meda Fulgida* as follows (the position of this entry under § 17.95(e) follows the same sequence as the species occurs in § 17.11):

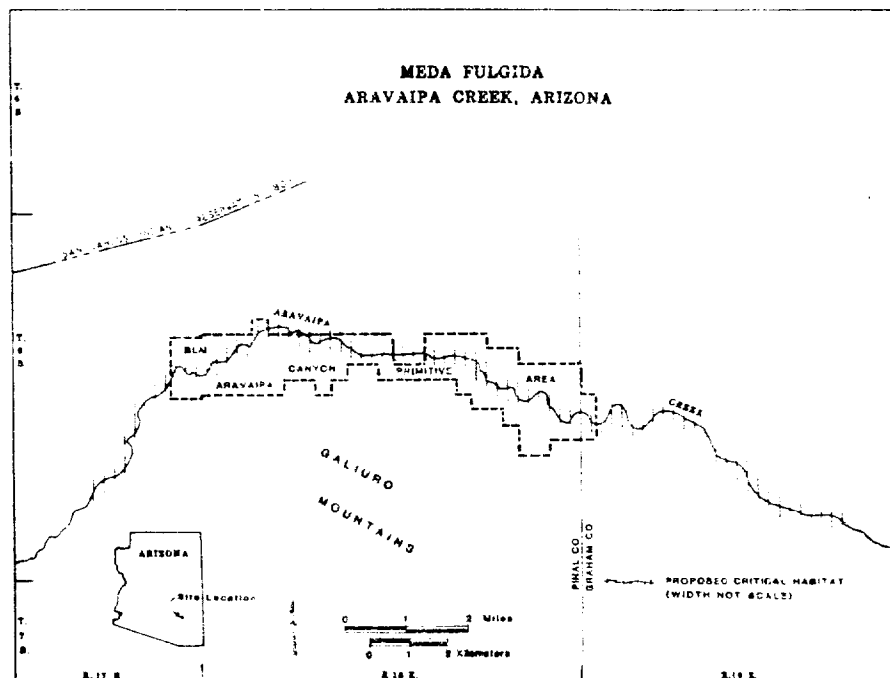
§ 17.95 Critical habitat—fish and wildlife.

(e) Fishes.

Spikedace (*Meda fulgida*)

Arizona:

1. *Graham and Pinal Counties*: Aravaipa Creek, approximately 24 kilometers of stream, extending from the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ Section 20, T6S; R17E upstream to the W $\frac{1}{2}$ of the NE $\frac{1}{4}$ Section 35, T6S; R19E.

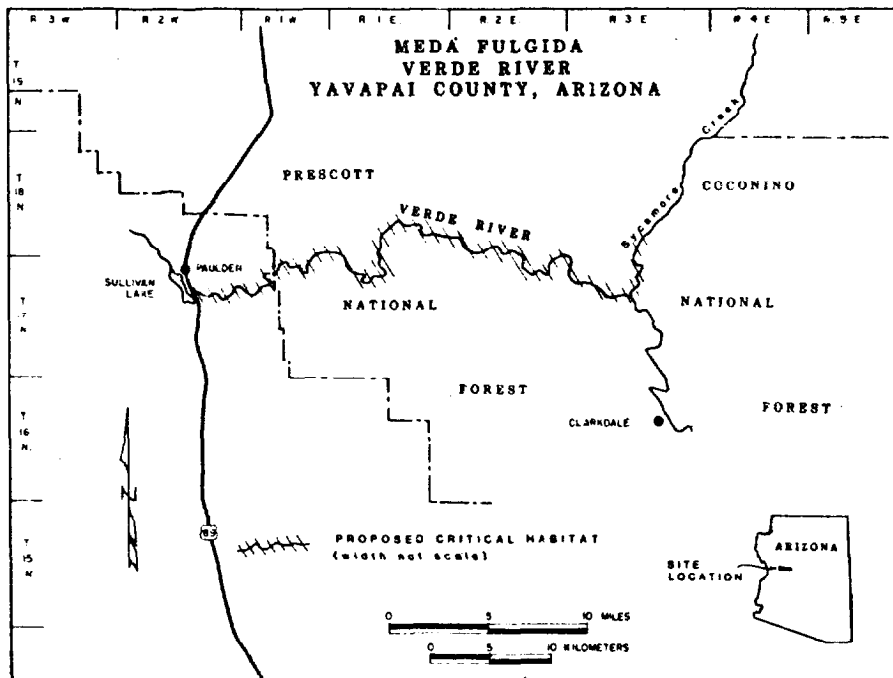


2. *Yavapai County*:

a. Verde River, approximately 57 kilometers of river, extending from about 0.8 kilometers below the confluence with

Sycamore Creek (south boundary of the NW $\frac{1}{4}$ Section 17, T17N; R3E) upstream to the Sullivan Lake dam (NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ Section 15, T17N; R2W).

b. Sycamore Creek, approximately 1 $\frac{1}{2}$ kilometers of stream, extending upstream from the confluence with the Verde River to the north boundary of Section 8, T17N; R3E.



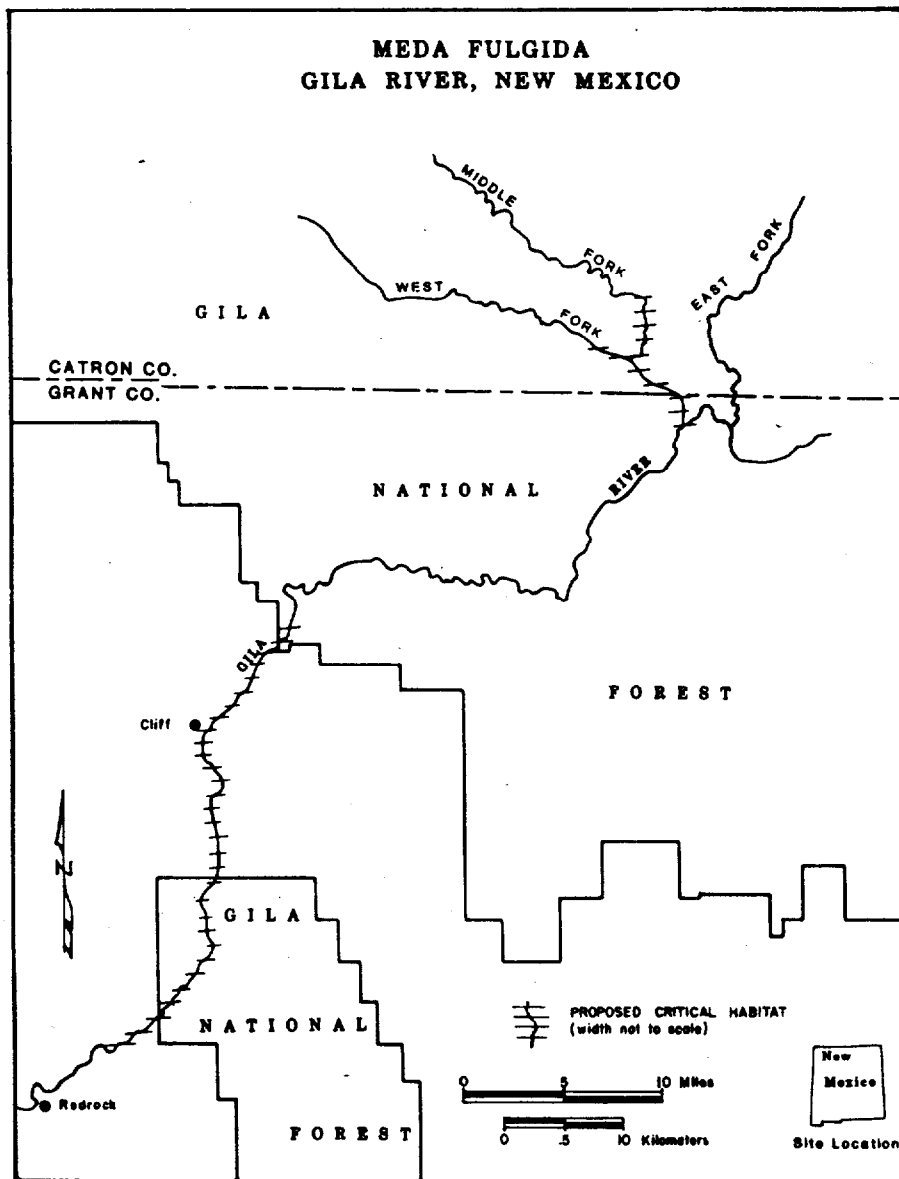
New Mexico:

1. *Grant County*: Gila River, approximately 50 kilometers of river extending from the mouth of the Middle Box canyon (MW ¼ of the SW ¼ Section 23, T18S; R18W) upstream to the confluence with Mogollon Creek (NE ¼ Section 31, T14S; R16W).

2. *Grant and Catron Counties*: West Fork Gila River, approximately 11 ½ kilometers of river, extending from the confluence with the

East Fork (center of Section 8, T13S; R13W) upstream to the west boundary Section 22, T12S; R14W.

3. *Catron County*: Middle Fork Gila River, approximately 11 ½ kilometers of river, extending from the confluence with the West Fork (SW ¼ Section 25, T12S; R14W) upstream to the confluence with Big Bear Canyon (NW ¼ Section 2, T12S; R14W).



Constituent elements, for all areas proposed as critical habitat, include permanent water with moderate to swift velocity; a depth of at least 10 centimeters over sand, gravel, and rubble substrate; and both pool and riffle components.

* * * * *

Dated: May 28, 1985.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 85-14471 Filed 6-17-85; 8:45 am]

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